The purpose of the Risk Management Procedure is to formalise and standardise risk management within Laing O’Rourke’s railway operations through:

- The identification and assessment of any risks to safety that have arisen or may arise from the carrying out of any railway operations on, or in relation to, Laing O’Rourke’s rail infrastructure or rolling stock; workers and third parties;
- The specification of the controls (including audits, expertise, resources and employees) that are to be used by Laing O’Rourke to monitor safety in relation to their railway operations, including reasons for selecting certain control measures and rejecting others; and
- Monitor, review and revise the identified risks and adequacy of the controls.

Laing O’Rourke has developed Next Gear as a means of managing safety risks through a number of processes including the Fatal and Severe Risk (FSR) Standards.

For projects involved in railway operations there needs to be a detailed analysis of the risks identified for the railway operations to be undertaken both:

- at the time of preparing bids and entering contracts; and
- prior to commencing work,

with the relevant controls incorporated in a project risk register as well as relevant Safe Work Method Statements or similar.

Prior to commencing work at the worksite a Laing O’Rourke representative or assigned nominee must undertake a Pre-Work Brief (record on E-C-8-1917N3) and contain references to the critical issues of the relevant Safe Work Method Statement (E-T-8-0971a). All people involved in the railway operations must sign the Pre-Work Brief.

During the period that the Pre-Work Brief is being undertaken the nominated Protection Officer (or equivalent) must convey to all workers at site the Worksite Protection Arrangements (record on E-C-8-1917N4 Worksite Protection Plan) and maintain required levels of communication with the work groups and Network Control (or equivalent) as necessary to safeguard the railway operations.

**PROCEDURES**

Existing processes for managing hazards relating to railway operations are included in the Laing O’Rourke Safety Management System and in particular through the Next Gear Standard and the FSR Standards.

Assessing what controls could be implemented is done through:

- Workshopping with relevant workers using Collective Insight process.
• Using the Permit to Proceed process to determine the highest level of safeworking to be applied.
• Considering what other railways or the broader industry does.
• Seeking expert advice, particularly if the risk is of sufficiently high level.
• Reviewing regulatory compliance requirements.
• Use the Risk Assessment SFAIRP (E-C-8-1914) tool to evaluate what controls are considered, which are to apply and the reason for the rejection of others.

The hazards and controls relevant to railway operations are contained in the Corporate Risk Register for Railway Operations linked to this procedure, which needs to be referenced by workers at projects prior to carrying out railway operations. Projects then need to conduct their own risk assessment using the information from the Corporate Risk Register for Railway Operations and develop a project specific Risk Register.

The following information should be contained in the risk register for railway operations and needs to include as a minimum the area, activity function, or scope that the register relates to, such as:
• Information showing when the register was last amended or reviewed
• A brief description of the activity or operation to be undertaken, including a summary of the main hazards
• A listing of the risks to safety identified
• Details of the assessment of those risks (including their likelihood, likely consequences and ranking); and with proposed additional controls implemented
• Other organisations responsible where the risk is not under direct control
• Existing control measures applicable to each hazard
• The effectiveness of the controls assigned.
• Nomination of person responsible for each risk control.
• Cross-references to the safety management system and the relative Fatal and Severe Risk.
• Standards applicable to the risk controls, including key engineering, operational and maintenance standards applicable to each control measure

The risk register is a live document that will require updating when new risks are identified that impact on the railway operations.

The person responsible for managing the project specific risk register (usually the Project Leader or their delegate) must ensure that any risks that impact broadly across Laing O’Rourke are brought to the attention of the Rail Safety and Compliance Manager for possible inclusion in the Corporate Risk Register for Railway Operations.

The Corporate Risk Register for railway operations must be reviewed at least annually as part of the overall SMS review process to enable a review to be undertaken of the controls assigned to measure their effectiveness and whether additional / alternative controls should be applied. Where through changes in work processes or technology other controls are deemed to be an improved control then they must be included in the risk register and advice conveyed to project personnel for any adjustment to their project specific risk register. Additional reviews of the risk register will need to be undertaken when new railway operations are undertaken that may contain new risks.

Identifying risks

When identifying and assessing risks at the time of preparing bids and entering contracts and prior to project commencement, the following issues should be considered/addressed:
• Infrastructure features, such as tunnels, bridges, underground stations;
• Rolling stock features, such as traction type, passenger or freight usage, type of freight (e.g. dangerous goods) and crash worthiness;
• Specific locations or geographic areas;
• Interfaces with other Rail Transport Operators (RTO’s), the road network or any other interface parties, regardless of who has direct control over the risk;
• Particular groups impacted, such as passengers, rail safety workers (employees, contractors, volunteers, and workers from other RTOs), and members of the public;
• Human factors;
• Regulatory compliance requirements;
• Both normal operations and abnormal or emergency operations;
• Maintenance activities and planned changes (either permanent or temporary); and
• Activities of third parties (e.g. trespass and vandalism).

Risks should also be identified after an accident, incident or near-miss, when new information becomes available, or when changes are introduced.

Management of Risks So Far As Is Reasonably Practicable (SFAIRP)

Laing O’Rourke must ensure, so far as is reasonably practicable, the safety of the railway operations undertaken to meet the provisions of the Rail Safety National Law and this requires demonstration of SFAIRP through Laing O’Rourke demonstrating the following requirements:

Section 46 of the RSNL requires the person to eliminate risks to safety SFAIRP, and if not reasonably practicable to eliminate, minimise risks SFAIRP.

Section 47 of the RSNL defines reasonably practicable in relation to a duty to ensure safety, means that which is (or was at a particular time) reasonably able to be done in relation to ensuring safety, taking into account and weighing up all relevant matters, including—

a) the likelihood of the hazard or the risk concerned occurring; and
b) the degree of harm that might result from the hazard or the risk; and
c) what the person concerned knows, or ought reasonably to know, about—
   I. the hazard or the risk; and
   II. ways of eliminating or minimising the risk; and

d) the availability and suitability of ways to eliminate or minimise the risk; and
e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk—
   the cost associated with available ways of eliminating or minimising the risk (including whether the cost is grossly disproportionate to the risk).

Therefore, by keeping a detailed record of all aspects of the assessment process under s100(2), including control measures considered and the reasons for selecting certain controls and rejecting others there is demonstration how the requirements of s47 have been met and thus demonstrates SFAIRP has been ensured (S46).

Weigh up “the cost associated with the available ways of eliminating or minimizing the risk” and any other contributing factors to determine whether the control is in fact practicable.

Where the railway operations for which Laing O’Rourke holds accreditation is to have a new requirement to be considered above what would be assessed in accordance with WH&S provisions and the development of the required Safe Work Method Statement greater analysis of the controls needs to be undertaken. This is to include an analysis of all controls considered and why the relevant control was accepted or rejected and the reasons why. To assist personnel in this task a Risk Assessment SFAIRP (E-C-8-1914) has been developed. All sections of the checklist must be completed including context setting, participants, SFAIRP Risk Assessment, Risk Actions etc.

Assessing what controls could be implemented is done through:
• Workshopping with relevant employees.
• Considering what other railways or the broader industry does.
• Expert advice, particularly if the risk is of sufficiently high level.

**Effectiveness of Risk Controls**

To support any SFAIRP argument Laing O’Rourke has included a column in the Corporate Risk Register for Railway Operations for the inclusion of an effectiveness rating for each of the existing controls. This is to assist in making an adequate determination of current risk rating and thus assist with risk evaluation whether existing controls are sufficient, need improvement or whether additional treatments are required. The following is the determination of what is considered in determining the effectiveness of risk rating.

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Description and Required Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ineffective</td>
<td>There are significant gaps in the design and operation of the control, and there is no confidence that any degree of control is being achieved</td>
</tr>
<tr>
<td>Needs attention</td>
<td>Control is not well designed and it is not operating well or effectively</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>Control is reasonably well designed and most aspects are operating effectively, with some areas for improvement;</td>
</tr>
<tr>
<td>Effective</td>
<td>Control is well designed, operating well as intended, and management, monitoring and review of control are established</td>
</tr>
</tbody>
</table>

**REGULATIONS, GUIDES AND STANDARDS**

Rail Safety National Law as applied in respective State or Territory
ONRSR Guideline Development of Safety Management System
ISO 31000 – Risk Management – Principles and Guidelines

**FORMS and TEMPLATES**

E-C-B-1914 Risk Assessment SFAIRP
E-C-B-1917N3 Pre Work Brief
E-C-B-1917N4 Worksite Protection Plan
E17N Monitoring Safeworking Guideline
E-T-8-0938 Risk Assessment
E-T-8-0971a Safe Work Method Statement (SWMS)
E-T-8-0971b SWMS Review Checklist
E-T-8-0971c SWMS Task Observation
Risk Register for Railway Operations
Risk Register for Railway Operations– Risk Matrix included in Attachment 1 (over)
## Attachment 1 - Risk Matrix

<table>
<thead>
<tr>
<th>Consequences</th>
<th>Likelihood</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock Operations</td>
<td>Almost Certain to happen</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Likely to happen at some point</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Moderate - possible, it might happen</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Unlikely - not likely to happen</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Rare - Practically impossible</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### Risk Rating Description Response

<table>
<thead>
<tr>
<th>Description</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-25</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>7-12</td>
<td>Tolerable with strict control measures or short duration</td>
</tr>
<tr>
<td>1-6</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>